5.21 Lampasas County Water Supply Plan

Table 5.21-1 lists each water user group in Lampasas County and their corresponding surplus or shortage in years 2040 and 2070. A brief summary of the water user groups and the plan for the selected water user are presented in the following subsections.

Table 5.21-1. Lampasas County Surplus/(Shortage)

Water User Group	Surplus/(Shortage)		Comment
	2040 (acft/yr)	2070 (acft/yr)	
City of Copperas Cove			See Coryell County
Corix Utilities Texas, Inc			See Washington county
Kempner WSC	(970)	(1,664)	Projected shortage - see plan below.
City of Lampasas	(308)	(600)	Projected shortage - see plan below.
County-Other	100	190	Projected surplus
Manufacturing	(22)	(3)	Projected shortage - see plan below.
Steam-Electric	0	0	No projected demand
Mining	(137)	(209)	Projected shortage - see plan below.
Irrigation	(233)	(242)	Projected shortage - see plan below.
Livestock	0	0	No projected surplus or shortage

5.21.1 Kempner WSC

Kempner WSC has service area in portions of Coryell, Bell, Lampasas and Burnet (Region K) Counties. Kempner WSC has contracted for 8,900 acft/yr of surface water supplies from the Brazos River Authority, which can supply 7,397 acft/yr in 2020 and 7,153 acft/yr in 2070, based on water availability analyses prescribed under water planning guidelines. Kempner's supplies are constrained by water treatment capacity to 3,965 acft/yr. Kempner WSC sells supplies to the Lampasas County-Other, Lampasas County Mining, and Salado WSC water user groups. Shortages are projected for Kempner WSC in 2020 through 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended to meet water needs for Kempner WSC. Conservation is recommended to reduce usage to a goal of 140 gpcd. Kempner WSC has no shortages in the Region K portion; however, the Region K RWPG has recommended conservation and drought management strategies. Shortages and strategies shown are for the Brazos G portion only.

a. Conservation

- Cost Source: Volume II
- Date to be Implemented: before 2030

- Unit Cost: $560/acft
- Annual Cost: maximum of $139,376 in 2070

b. Firm Up BRA Little River Supplies
   - Cost Source: Volume II
   - Date to be Implemented: before 2030
   - Project Cost: Costs borne by BRA
   - Unit Cost: Costs borne by BRA

c. Increase Water Treatment Plant Capacity
   - Cost Source: Volume II
   - Date to be Implemented: before 2030
   - Project Cost: $10,821,000
   - Unit Cost: $879/acft

Table 5.21-2. Recommended Plan Costs by Decade for Kempner WSC

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(470)*	*(740)*	*(970)*	*(1,211)*	*(1,445)*	*(1,664)*
Conservation						
Supply From Plan Element (acft/yr)	0	234	233	229	237	249
Annual Cost ($/yr)	$0	$131,221	$130,715	$128,005	$132,825	$139,376
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(470)*	*(506)*	*(737)*	*(982)*	*(1,208)*	*(1,415)*
Additional Demands from Recommended Strategies from Others						
Increase Contract Amount to City of Lampasas (acft/yr)	121	226	308	403	504	600
Increase Contract Amount to City of Lampasas to then sell to Manufacturing (acft/yr)	7	16	7	4	–	–
Total Needs Including Recommended Strategies	*(598)*	*(748)*	*(1,045)*	*(1,389)*	*(1,712)*	*(2,015)*
Firm Up BRA Little River Supplies						
Supply From Plan Element (acft/yr)	–	1,551	1,600	1,649	1,698	1,747
Annual Cost ($/yr)	–	–	–	–	–	–
Unit Cost ($/acft)	–	–	–	–	–	–
Increase WTP Capacity						
Supply From Plan Element (acft/yr)[A]	1,120	1,120	1,120	2,015	2,015	2,015
Annual Cost ($/yr)	$984,480	$984,480	$477,120	$858,390	$858,390	$858,390
Unit Cost ($/acft)	$879	$879	$426	$426	$426	$426

A – Quantity represents increase in treatment capacity required to develop existing supplies currently constrained by treatment capacity. Existing contracted supplies are sufficient to meet shortage if treatment capacity is expanded.

5.21.2 City of Lampasas

Description of Supply

The City of Lampasas has contracted for water supply from Kempner WSC at 1,144 to 1,068 acft/yr. City of Lampasas has contracted for 3,500 acft/yr of surface water supplies from the Brazos River Authority, which can supply 2,909 acft/yr in 2020 and 2,813 acft/yr in 2070, based on water availability analyses prescribed under water planning guidelines. City of Lampasas supplies are constrained by water treatment capacity. The City provides supply for Lampasas County-Manufacturing demands. Shortages are projected beginning in 2020 and last through 2070. Needs remain unmet in 2020. These needs will only occur during a drought equivalent or worse than the drought of record. While not a strategy recommended by the Brazos G RWPG, the impacts of the unmet needs can be mitigated through demand management in the event of a serious drought prior to the recommended strategies coming online.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended to meet water needs for the City of Lampasas. Conservation was considered; however, the entity's usage is below the selected goal of 140 gpcd.

d. Firm Up BRA Little River Supplies

- Cost Source: Volume II
- Date to be Implemented: before 2030
- Project Cost: costs borne by BRA
- Unit Cost: costs borne by BRA

Table 5.21-3. Recommended Plan Costs by Decade for City of Lampasas

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(121)*	*(226)*	*(308)*	*(403)*	*(504)*	*(600)*
Conservation						
Supply From Plan Element (acft/yr)	–	–	–	–	–	–
Annual Cost ($/yr)	–	–	–	–	–	–
Projected Surplus/(Shortage) after Conservation	*(121)*	*(226)*	*(308)*	*(403)*	*(504)*	*(600)*
Firm Up BRA Little River Supplies						
Supply From Plan Element (acft/yr)	–	610	629	649	668	687
Annual Cost ($/yr)	–	–	–	–	–	–
Unit Cost ($/acft)	–	–	–	–	–	–

5.21.3 County-Other

Entities included in Lampasas County-Other obtain water supply from the Trinity Aquifer at 5 acft/yr and Marble Falls Aquifer at 6 acft/yr. Surpluses are projected through 2070 and no changes in water supply are recommended. Conservation was considered; however, the entity's current per capita use rate is below the selected target rate of 140 gpcd.

5.21.4 Manufacturing

Lampasas County Manufacturing obtains its water supply the City of Lampasas at 137 to 213 acft/yr and run-of-river rights at 48 to 0 acft/yr from 2020 to 2070. Based on the available surface water supply, Lampasas County Manufacturing is projected to have a shortage through 2050 after conservation.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended to meet water needs for the Lampasas County Manufacturing. Conservation is recommended.

a. Conservation
   - Cost Source: Volume II
   - Date to be Implemented: by 2030
   - Annual Cost: not determined

b. Increase treatment contract with City of Lampasas
   - Cost Source: Volume II
   - Date to be Implemented: 2020
   - Project Cost: Existing infrastructure assumed sufficient
   - Unit Cost: $500/acft

Table 5.21-4. Recommended Plan Costs by Decade for Lampasas County-Manufacturing

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(13)*	*(27)*	*(22)*	*(19)*	*(11)*	*(3)*
Conservation						
Supply From Plan Element (acft/yr)	6	11	15	15	15	15
Annual Cost ($/yr)	ND	ND	ND	ND	ND	ND
Projected Surplus/(Shortage) after Conservation	*(7)*	*(16)*	*(7)*	*(4)*	*4*	*12*
Increase treated water contract from City of Lampasas						
Supply From Plan Element (acft/yr)	7	16	7	4	–	–
Annual Cost ($/yr)	$3,500	$8,000	$3,500	$2,000	–	–
Unit Cost ($/acft)	$500	$500	$500	$500	$500	$500

ND – Not determined. Costs to implement industrial conservation technologies will vary based on each location.

5.21.5 Steam-Electric

No Steam-Electric demand is projected for Lampasas County.

5.21.6 Mining

Description of Supply

Lampasas County Mining currently obtains its water supply from Kempner WSC at 25 acft/yr and the Ellenburger-San Saba Aquifer at 79 acft/yr. Mining is projected to have shortages starting in 2020 to 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended for Lampasas County-Mining. Conservation is recommended.

a. Conservation
   - Cost Source: Volume II
   - Date to be Implemented: by 2030
   - Annual Cost: not determined

b. Groundwater Development – Ellenburger-San Saba Aquifer
   - Cost Source: Volume II
   - Date to be Implemented: by 2030
   - Project Cost: $2,051,000
   - Unit Cost: $936

Table 5.21-5. Recommended Plan Costs by Decade for Lampasas County – Mining

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(94)*	*(117)*	*(137)*	*(157)*	*(182)*	*(209)*
Conservation						
Supply From Plan Element (acft/yr)	6	11	17	18	20	22
Annual Cost ($/yr)	ND	ND	ND	ND	ND	ND
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(88)*	*(106)*	*(120)*	*(139)*	*(162)*	*(187)*
Groundwater Development – Ellenburger-San Saba Aquifer						
Supply From Plan Element (acft/yr)	88	106	120	139	162	187
Annual Cost ($/yr)	$82,368	$99,216	$19,680	$22,796	$26,568	$30,668
Unit Cost ($/acft)	$936	$936	$164	$164	$164	$164

ND – Not determined. Costs to implement industrial conservation technologies will vary based on each location.

5.21.7 Irrigation

Description of Supply

Lampasas County Irrigation is supplied by the Trinity and Marble Falls Aquifers at 208 acft/yr and run of the river water rights at 103 to 88 acft/yr. Irrigation is projected to have shortages beginning in 2020 through 2070.

Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water management strategies are recommended to meet water needs for Lampasas County-Irrigation. Conservation is recommended.

a. Conservation
   - Cost Source: Volume II
   - Date to be Implemented: by 2030
   - Annual Cost: maximum of $5,936 in 2030
   - Unit Cost: $1,285/acft

b. Groundwater Development – Marble Falls Aquifer
   - Cost Source: Volume II
   - Date to be Implemented: by 2030
   - Project Cost: $2,054,000
   - Unit Cost: Max of $834/ acft/yr

Table 5.21-6. Recommended Plan Costs by Decade for Lampasas County – Irrigation

Plan Element	2020	2030	2040	2050	2060	2070
Projected Surplus/(Shortage) (acft/yr)	*(227)*	*(230)*	*(233)*	*(236)*	*(239)*	*(242)*
Conservation						
Supply From Plan Element (acft/yr)	16	27	38	38	38	38
Annual Cost ($/yr)	$20,734	$34,557	$48,380	$48,380	$48,380	$48,380
Unit Cost ($/acft)	$1,285	$1,285	$1,285	$1,285	$1,285	$1,285
Projected Surplus/(Shortage) after Conservation (acft/yr)	*(211)*	*(203)*	*(195)*	*(198)*	*(201)*	*(204)*
Groundwater Development – Marble Falls Aquifer						
Supply From Plan Element (acft/yr)	211	203	195	198	201	204
Annual Cost ($/yr)	$175,974	$169,302	$29,055	$29,502	$29,949	$30,396
Unit Cost ($/acft)	$834	$834	$149	$149	$149	$149

5.21.8 Livestock

Livestock water supply is projected to meet demands through 2070 and no changes in water supply are recommended.